

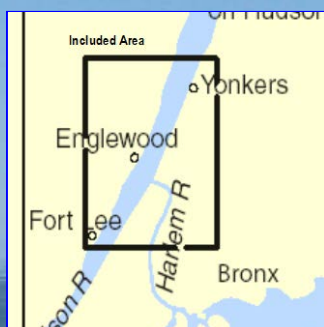
BookletChart™



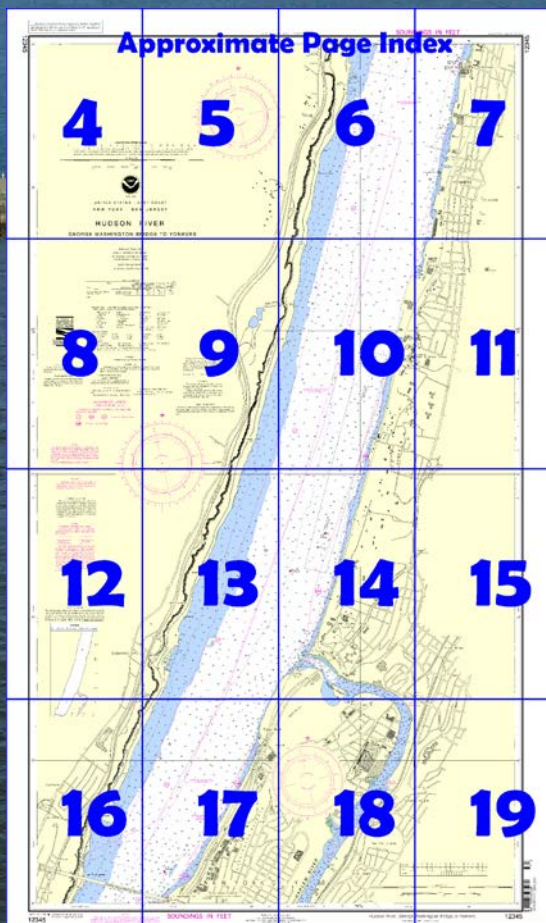
Hudson River – George Washington Bridge to Yonkers NOAA Chart 12345

A reduced-scale NOAA nautical chart for small boaters

When possible, use the full-size NOAA chart for navigation.



- Complete, reduced-scale nautical chart
- Print at home for free
- Convenient size
- Up-to-date with Notices to Mariners
- Compiled by NOAA's Office of Coast Survey, the nation's chartmaker



Published by the
National Oceanic and Atmospheric Administration
National Ocean Service
Office of Coast Survey
www.NauticalCharts.NOAA.gov
888-990-NOAA

What are Nautical Charts?

Nautical charts are a fundamental tool of marine navigation. They show water depths, obstructions, buoys, other aids to navigation, and much more. The information is shown in a way that promotes safe and efficient navigation. Chart carriage is mandatory on the commercial ships that carry America's commerce. They are also used on every Navy and Coast Guard ship, fishing and passenger vessels, and are widely carried by recreational boaters.

What is a BookletChart™?

This BookletChart is made to help recreational boaters locate themselves on the water. It has been reduced in scale for convenience, but otherwise contains all the information of the full-scale nautical chart. The bar scales have also been reduced, and are accurate when used to measure distances in this BookletChart. See the Note at the bottom of page 5 for the reduction in scale applied to this chart.

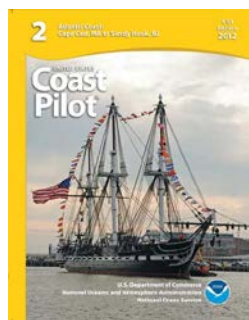
Whenever possible, use the official, full scale NOAA nautical chart for navigation. Nautical chart sales agents are listed on the Internet at <http://www.NauticalCharts.NOAA.gov>.

This BookletChart does NOT fulfill chart carriage requirements for regulated commercial vessels under Titles 33 and 44 of the Code of Federal Regulations.

Notice to Mariners Correction Status

This BookletChart has been updated for chart corrections published in the U.S. Coast Guard Local Notice to Mariners, the National Geospatial Intelligence Agency Weekly Notice to Mariners, and, where applicable, the Canadian Coast Guard Notice to Mariners. Additional chart corrections have been made by NOAA in advance of their publication in a Notice to Mariners. The last Notices to Mariners applied to this chart are listed in the Note at the bottom of page 7. Coast Pilot excerpts are not being corrected.

For latest Coast Pilot excerpt visit the Office of Coast Survey website at <http://www.nauticalcharts.noaa.gov/nsd/searchbychart.php?chart=12345>



(Selected Excerpts from Coast Pilot)

From Fort Lee, N.J., the rocky cliffs of **Palisades State Park** and adjoining **Tallman Mountain State Park** extend up the west side of the river for about 12 miles to Piermont, N.Y. The Palisades are 300 to 500 feet high and in places are thickly wooded with scrub.

Tubby Hook, Mile 11E, has several small-boat landings.

Spuyten Duyvil Creek, entered at Mile 12E, is

marked by the railroad swing bridge over the mouth. The creek is the Hudson River entrance to Harlem River, which is described in chapter 9. Currents are swift and erratic around the mouth of the creek.

Englewood Boat Basin, on the New Jersey side opposite Spuyten Duyvil Creek, has depths of 3 to 5 feet and can accommodate craft to 50 feet long; berths, gasoline, diesel fuel, and water are available.

Yonkers, Mile 16E, adjoins the north side of New York City. Waterborne commerce is in petroleum products, sugar and syrup products, cement, sand, and other building materials.

A sugar refining plant (40°55'41"N., 73°54'21"W.) has a 400-foot marginal wharf with depths of 28 to 30 feet alongside and a deck height of 10 feet. The plant has 20,000 tons of covered storage and is served by a conveyor system with two 20-ton hoppers for the receipt of raw sugar. Vessels berth outboard of two floating cranes moored at the face of the wharf.

The U.S. Volunteer Life Saving Corporation maintains small craft at Yonkers for search and rescue work.

Seasonal buoyage.—The lighted buoys marking the Hudson River channel are replaced during the winter by smaller lighted ice buoys or unlighted buoys.

Dangers.—Numerous fishtraps are planted each spring, usually from about mid-March to mid-May, during the seasonal run of shad to the spawning grounds in the upper Hudson. The charts show the fishtrap areas in the 30-mile stretch beginning about 5 miles above The Battery and extending upriver to Stony Point; Corps of Engineers permits are required for the placing of shad nets and poles in the charted areas. Outer limits of the nets usually are marked by flags during the day and by lights during the night. Caution is advised when navigating a fishtrap area because broken-off poles from previous traps may remain under the surface.

Navigation of the river is easy as far north as Kingston, but above Kingston it is more difficult because of the numerous steep-to shoals and middle grounds. In general tows are apt to follow the shoreline which is most favorable as regards wind and current; with a strong northwest wind, tows will follow the west shore regardless of the direction in which they are traveling.

Tides.—The tides in Hudson River are affected by freshets, winds, and droughts.

Currents.—The currents in Hudson River are influenced by the same variables that affect the tides. The times of slack water and the velocities and durations of flood and ebb are subject to extensive changes; the times of strengths are less likely to be affected. The currents usually set fair with the channels except in the vicinities of bends and wharves. Velocities of currents are 1.4 knots flood and 1.4 knots ebb northwest of The Battery, 1.6 and 2.2 knots at George Washington Bridge, 0.9 and 1.1 knots at Newburgh, 1.1 and 1.2 knots at Poughkeepsie, 1.3 and 1.6 knots at Kingston, and 0.3 knot flood and 0.8 knot ebb at Albany. Near Troy Lock and Dam, the current does not flood and the ebb has a velocity of 0.7 knot. These values are for the summer when the freshwater discharge is at a minimum.

Freshets.—During March, April, and May, freshets have reached heights above normal high water of as much as 18 feet at Albany and 25 feet at Troy Lock and Dam. At the time of the larger freshets the tide may be completely masked.

During the smaller freshets, the flood current disappears and the ebb current has a velocity of about 1.5 knots. The larger freshets produce an ebb current that varies from 1.5 to nearly 5 knots depending on the size of the freshet and the stage of the tide.

Spuyten Duyvil Creek, entered at Mile 12E, is marked by the railroad swing bridge over the mouth. The creek is the Hudson River entrance to Harlem River, which is described in chapter 9. Currents are swift and erratic around the mouth of the creek.

U.S. Coast Guard Rescue Coordination Center 24 hour Regional Contact for Emergencies

RCC Boston	Commander	
	1st CG District	(617) 223-8555
	Boston, MA	

Navigation Managers Area of Responsibility



NOAA's navigation managers serve as ambassadors to the maritime community.

They help identify navigational challenges facing professional and recreational mariners, and provide NOAA resources and information for safe navigation. For additional information, please visit nauticalcharts.noaa.gov/service/navmanagers

To make suggestions or ask questions online, go to nauticalcharts.noaa.gov/inquiry.

To report a chart discrepancy, please use ocsdata.ncd.noaa.gov/idrs/discrepancy.aspx.

Lateral System As Seen Entering From Seaward

on navigable waters except Western Rivers



For more information on aids to navigation, including those on Western Rivers, please consult the latest USCG Light List for your area.

These volumes are available online at <http://www.navcen.uscg.gov>

This nautical chart has been designed to promote safe navigation. The National Ocean Service encourages users to submit corrections, additions, or comments for improving this chart to the Chief, Marine Chart Division (N/CS2), National Ocean Service, NOAA, Silver Spring, Maryland 20910-3282.

12345



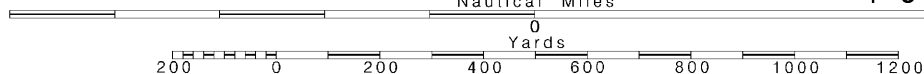
4

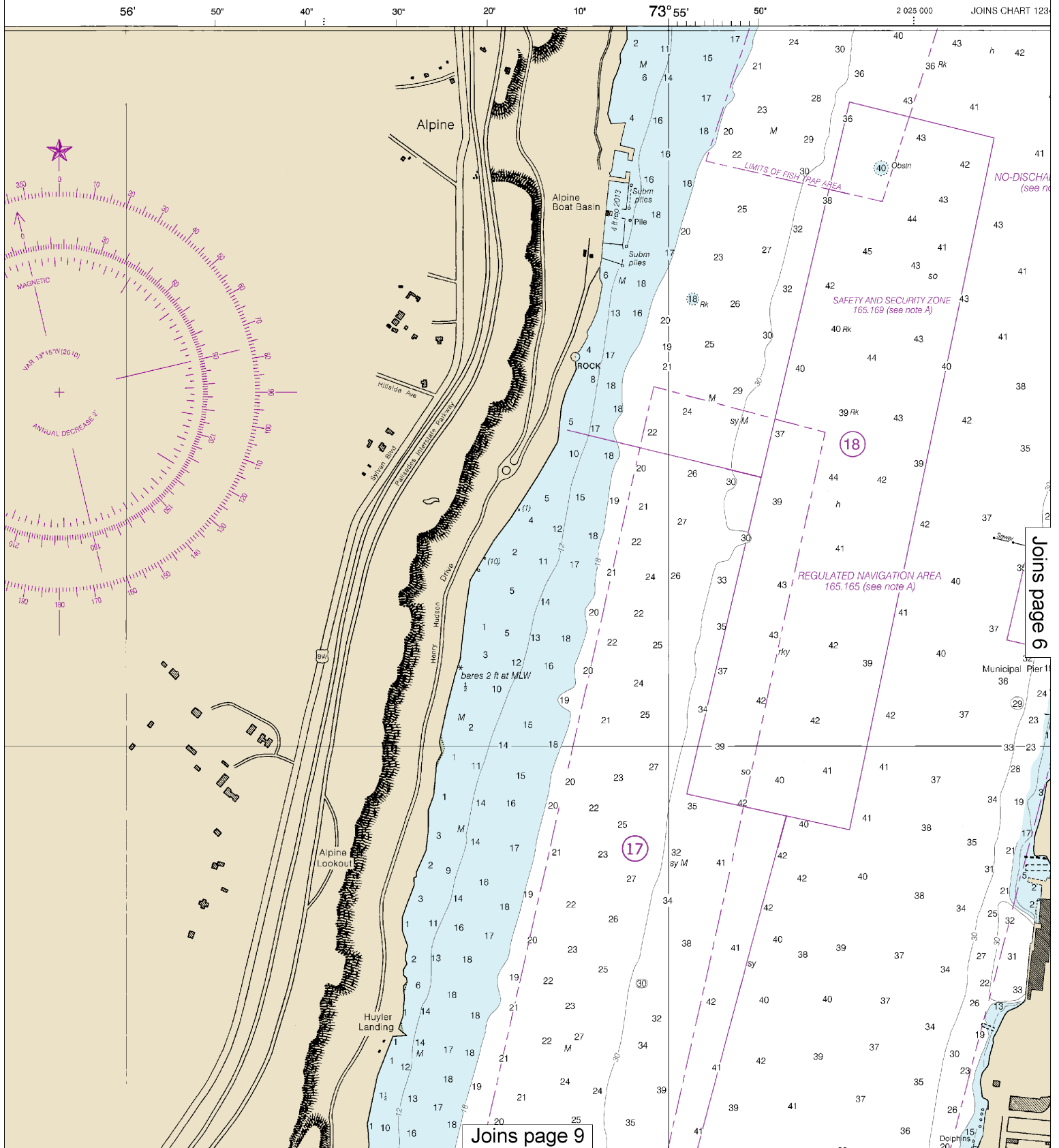
Note: Chart grid lines are aligned with true north.

Printed at reduced scale.

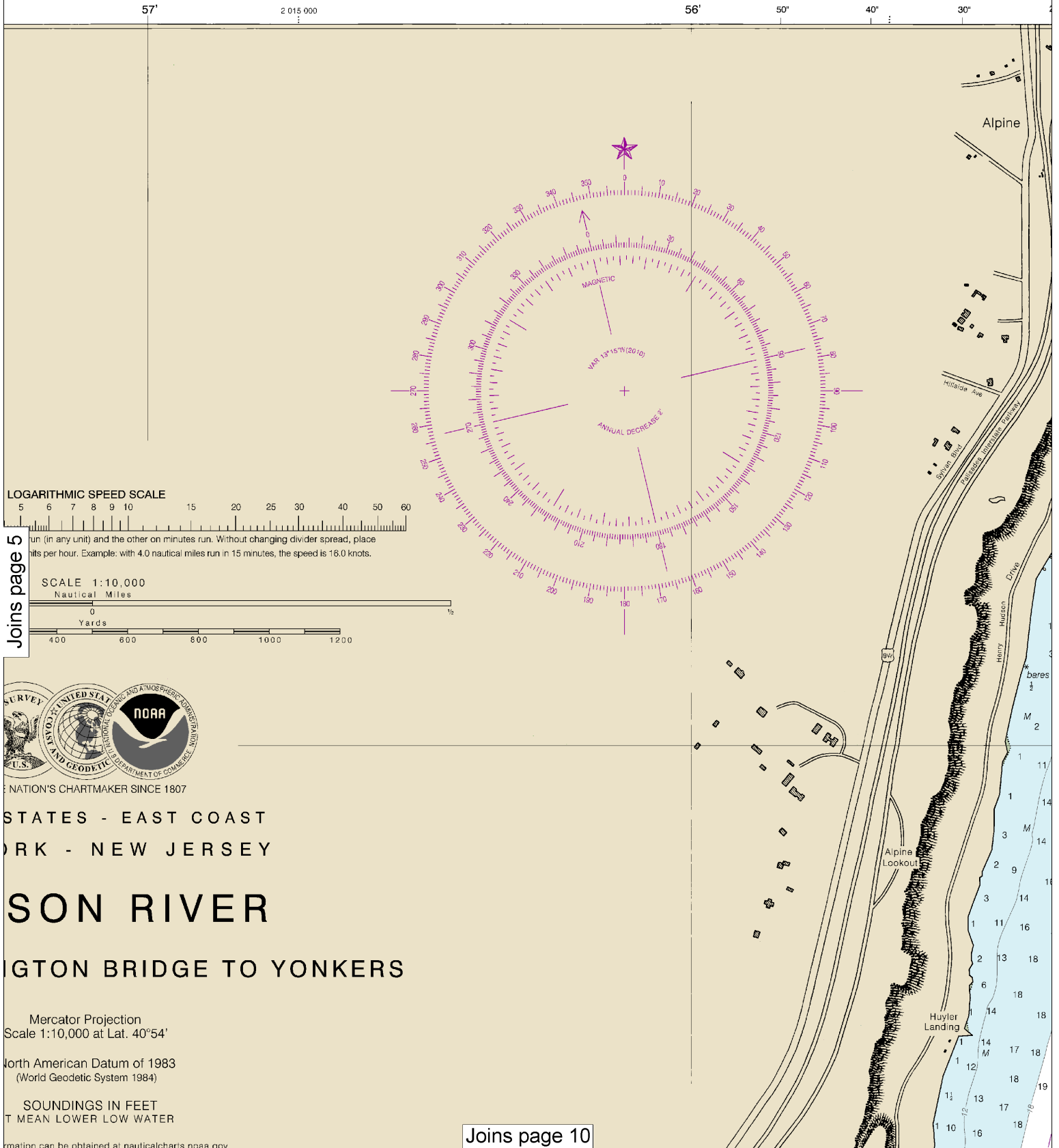
SCALE 1:10,000

See Note on page 5.

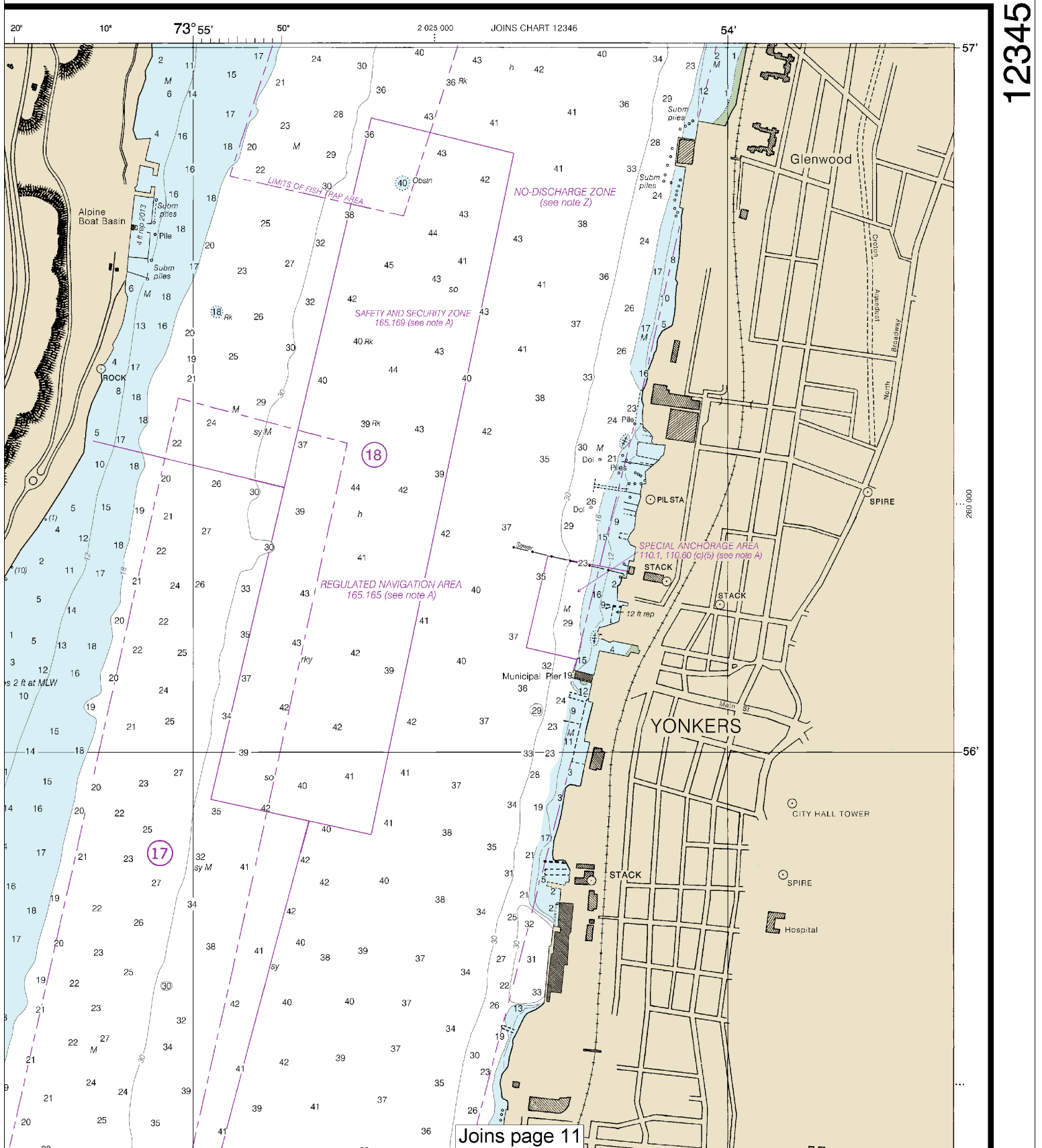




This BookletChart was reduced to 75% of the original chart scale.
The new scale is 1:13333. Barscales have also been reduced and
are accurate when used to measure distances in this BookletChart.



SOUNDINGS IN FEET



12345

SOUNDINGS IN FEET
AT MEAN LOWER LOW WATER

Additional information can be obtained at nauticalcharts.noaa.gov.

TIDAL INFORMATION

PLACE		Height referred to datum of soundings (MLLW)		
NAME	(LAT/LONG)	Mean Higher High Water feet	Mean High Water feet	Mean Low Water feet
Spuyten Duyvil	(40°53' N/73°56' W)	4.3	4.0	0.2

Dashes (- -) located in datum columns indicate unavailable datum values for a tide station. Real-time water levels, tide predictions, and tidal current predictions are available on the Internet from <http://tidesandcurrents.noaa.gov>. (Dec 2010)

HEIGHTS

Heights in feet above Mean High Water.

AUTHORITIES

Hydrography and topography by the National Ocean Service, Coast Survey, with additional data from the Corps of Engineers, Geological Survey, and U.S. Coast Guard.

NOTE A

Navigation regulations are published in Chapter 2, U.S. Coast Pilot 2. Additions or revisions to Chapter 2 are published in the Notice to Mariners. Information concerning the regulations may be obtained at the Office of the Commander, 1st Coast Guard District in Boston, MA or at the Office of the District Engineer, Corps of Engineers in New York, NY.
Refer to charted regulation section numbers.

SUPPLEMENTAL INFORMATION

Consult U.S. Coast Pilot 2 for important supplemental information.

FISH TRAP AREAS

Boundary lines of fish trap areas are shown thus:
Submerged piling may exist in these areas.

AIDS TO NAVIGATION

Consult U.S. Coast Guard Light List for supplemental information concerning aids to navigation.

RADAR REFLECTORS

Radar reflectors have been placed on many floating aids to navigation. Individual radar reflector identification on these aids has been omitted from this chart.

PLANE COORDINATE GRID

(based on NAD 1927)

The New York State Grid, Long Island zone, is indicated by dotted ticks at 5,000 foot intervals.

ABBREVIATIONS (For complete list of Symbols and Abbreviations, see Chart No. 1.)

Aids to Navigation (lights are white unless otherwise indicated):

AERO aeronautical	G green	N nun	R TR radio tower
Al alternating	IQ interrupted quick	OBSC obscured	Rt rotating
B black	iso isophase	OC occulting	s seconds
Bn beacon	LT HO lighthouse	Or orange	SEC sector
C can	M nautical mile	Osc oscillating	St M statute miles
D/A diaphone	m minutes	Q quick	VQ very quick
F fixed	MICRO TR microwave tower	R red	W white
Fl flashing	Mkr marker	Ra Ref radar reflector	WHIS whistle
	Mo morse code	R Bn radiobeacon	Y yellow

Bottom characteristics:

Bds boulders	Co coral	gy gray	Oys oysters	so soft
bk broken	G gravel	h hard	Rk rock	Sh shells
Cy clay	Grs grass	M mud	S sand	sy sticky

Miscellaneous:

AUTH authorized	Obstr obstruction	PD position doubtful	Subm submerged
ED existence doubtful	PA position approximate	Rep reported	
(1) Wreck rock, obstruction, or shoal swept clear to the depth indicated.			
(2) Rocks that cover and uncover, with heights in feet above datum of soundings.			

NOAA WEATHER RADIO BROADCASTS

The NOAA Weather Radio station listed below provides continuous weather broadcasts. The reception range is typically 20 to 40 nautical miles from the antenna site, but can be as much as 100 nautical miles for stations at high elevations.

New York, NY KWO-35 162.550 MHz

CAUTION

Temporary changes or defects in aids to navigation are not indicated on this chart. See Local Notice to Mariners.

During some winter months or when endangered by ice, certain aids to navigation are replaced by other types or removed. For details see U.S. Coast Guard Light List.

POLLUTION REPORTS

Report all spills of oil and hazardous substances to the National Response Center via 1-800-424-8802 (toll free), or to the nearest U.S. Coast Guard facility if telephone communication is impossible (33 CFR 153).

ANCHORAGE AREAS
110.155 (see note A)

Limits and assigned numbers of anchorage areas are shown in magenta.

17 18 18A 19E GENERAL ANCHORAGE

WARNING

The prudent mariner will not rely solely on any single aid to navigation, particularly on floating aids. See U.S. Coast Guard Light List and U.S. Coast Pilot for details.

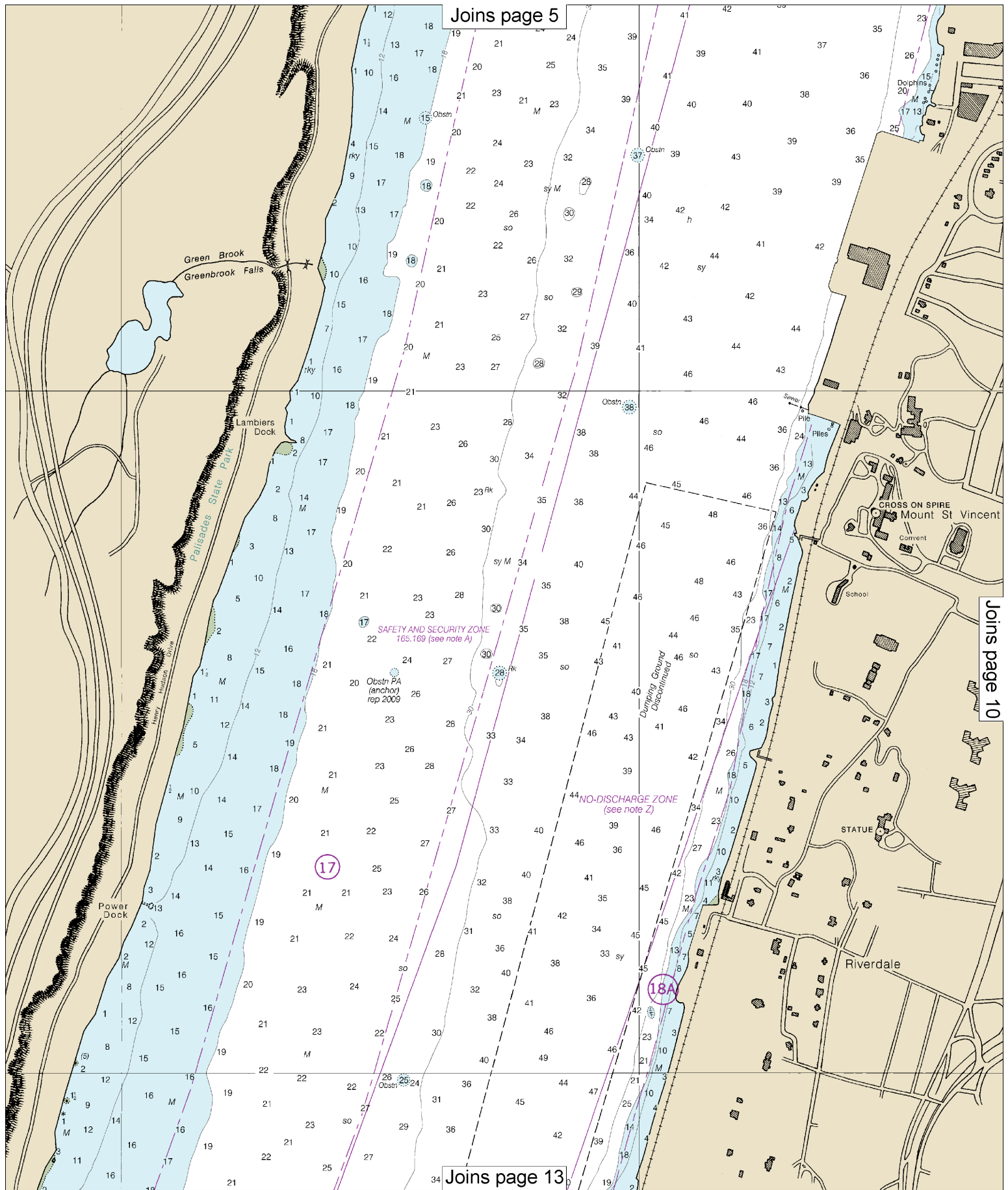
Joins page 12

Printed at reduced scale.

SCALE 1:10,000
Nautical Miles

See Note on page 5.

0
Yards
200 0 200 400 600 800 1000 1200



North American Datum of 1983
(World Geodetic System 1984)

SOUNDINGS IN FEET
T MEAN LOWER LOW WATER

Information can be obtained at nauticalcharts.noaa.gov.

TIDAL INFORMATION			
(LAT/LONG)	Height referred to datum of soundings (MLLW)		
	Mean Higher High Water	Mean High Water	Mean Low Water
(40°53'N/73°56'W)	feet 4.3	feet 4.0	feet 0.2

Numbers indicate unavailable datum values for a tide station. Real-time water levels and predictions are available on the Internet from <http://tidesandcurrents.noaa.gov>.

HEIGHTS
Heights in feet above Mean High Water.

AUTHORITIES
Soundings and topography by the National Ocean Service, Coast and Geodetic Survey. Additional data from the Corps of Engineers, Geological Survey, and U.S. Coast Guard.

NOTE A
Regulations are published in Chapter 2, U.S. Coast Pilot 2. Additions or revisions to Chapter 2 are published in the Notice to Mariners. Information concerning regulations may be obtained at the Office of the Commandant, U.S. Coast Guard District in Boston, MA or at the Office of the District Engineer, Corps of Engineers in New York, NY. Refer to charted regulation section numbers.

SUPPLEMENTAL INFORMATION
Consult U.S. Coast Pilot 2 for important supplemental information.

Refer to list of Symbols and Abbreviations, see Chart No. 1, for symbols unless otherwise indicated.

G green	N run	R TR radio tower
IQ interrupted quick	OBSC obscured	Rot rotating
ISO isophase	OC occulting	S seconds
LT HO lighthouse	OR orange	SEC sector
M nautical mile	Osc oscillating	St M statute miles
m minutes	Q quick	VQ very quick
MICRO TR microwave tower	R red	W white
Mir marker	Ra Ref radar reflector	WHIS whistle
Morse code	R Bn radiobeacon	Y yellow

gy gray	Oys oysters	so soft
h hard	Rk rock	Sh shells
M mud	S sand	sy sticky

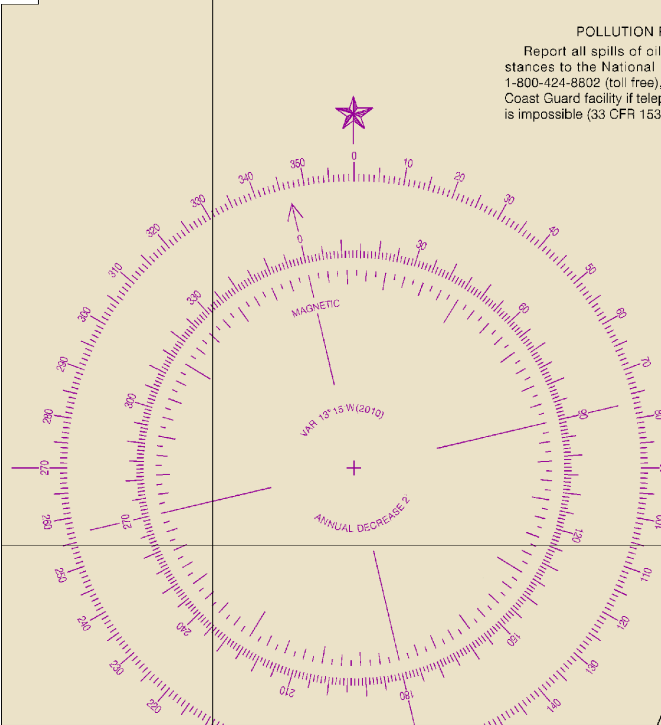
Obstr obstruction. PD position doubtful. Subm submerged.
Position approximate. Rep reported.
Shoal swept clear to the depth indicated.
Ref, with heights in feet above datum of soundings.

NOAA WEATHER RADIO BROADCASTS
The NOAA Weather Radio station listed below provides continuous weather broadcasts. The reception range is typically 20 to 40 nautical miles from the antenna site, but can be as much as 100 nautical miles for stations at high elevations.

New York, NY KWO-35 162.550 MHz

CAUTION
Temporary changes or defects in aids to navigation are not indicated on this chart. See Local Notice to Mariners.
During some winter months or when endangered by ice, certain aids to navigation are replaced by other types or removed. For details see U.S. Coast Guard Light List.

POLLUTION REPORTS
Report all spills of oil and hazardous substances to the National Response Center via 1-800-424-8802 (toll free), or to the nearest U.S. Coast Guard facility if telephone communication is impossible (33 CFR 153).



Joins page 6

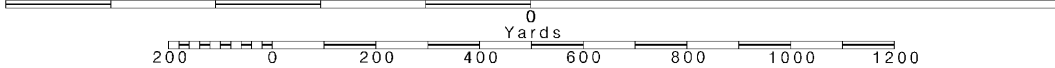
Joins page 14

10

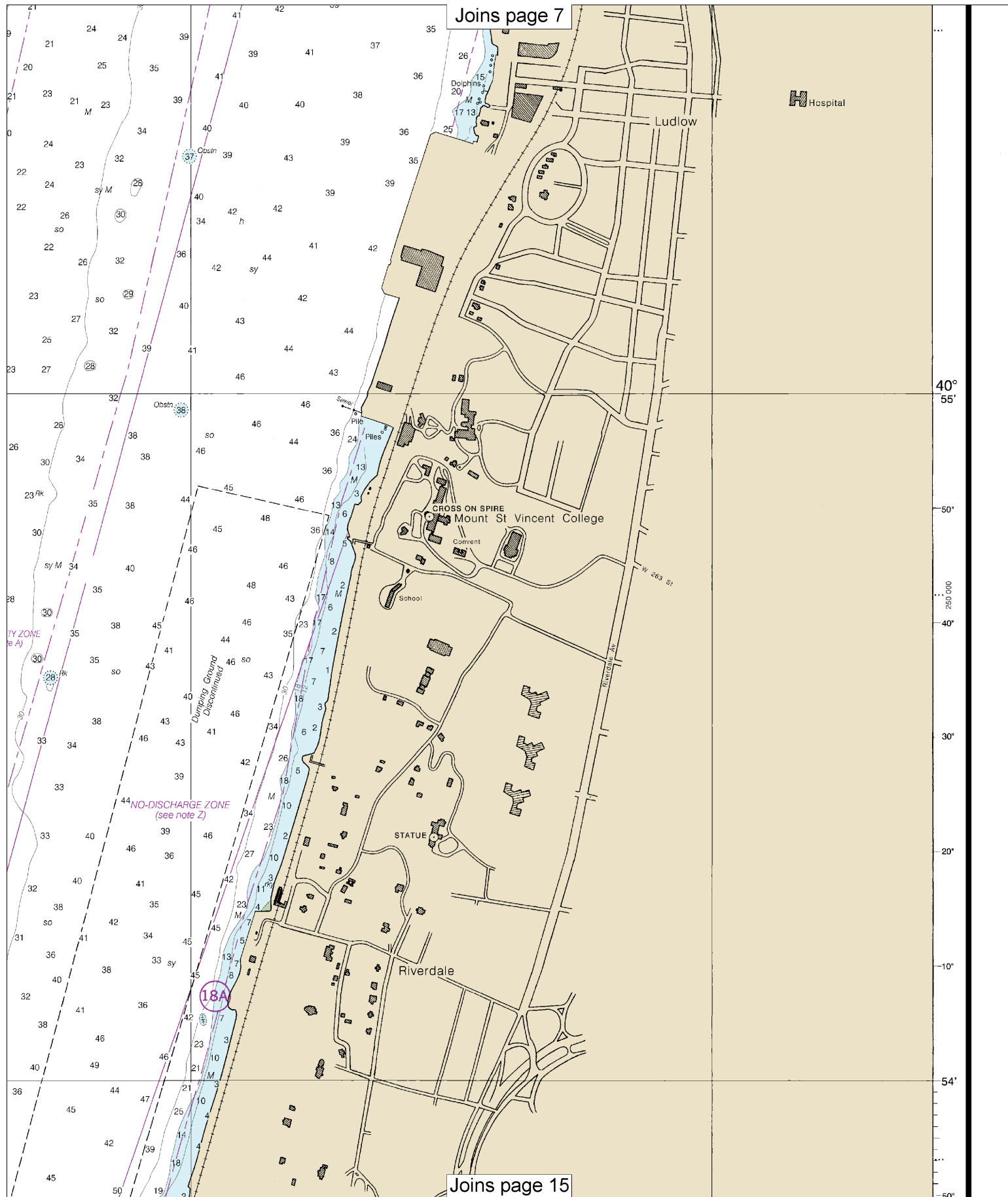
Note: Chart grid lines are aligned with true north.

Printed at reduced scale. SCALE 1:10,000

See Note on page 5.



Joins page 7



Joins page 15

The prudent mariner will not rely solely on any single aid to navigation, particularly on floating aids. See U.S. Coast Guard Light List and U.S. Coast Pilot for details.

HORIZONTAL DATUM

The horizontal reference datum of this chart is North American Datum of 1983 (NAD 83), which for charting purposes is considered equivalent to the World Geodetic System 1984 (WGS 84). Geographic positions referred to the North American Datum of 1927 must be corrected an average of 0.360" northward and 1.513" eastward to agree with this chart.

CAUTION

SUBMARINE PIPELINES AND CABLES

Charted submarine pipelines and submarine cables and submarine pipeline and cable areas are shown as:



Additional uncharted submarine pipelines and submarine cables may exist within the area of this chart. Not all submarine pipelines and submarine cables are required to be buried, and those that were originally buried may have become exposed. Mariners should use extreme caution when operating vessels in depths of water comparable to their draft in areas where pipelines and cables may exist, and when anchoring, dragging, or trawling.

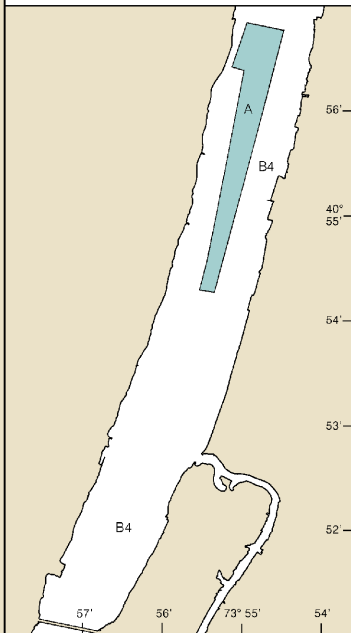
Covered wells may be marked by lighted or unlighted buoys.

SOURCE DIAGRAM

The outlined areas represent the limits of the most recent hydrographic survey information that has been evaluated for charting. Surveys have been banded in this diagram by date and type of survey. Channels maintained by the U.S. Army Corps of Engineers are periodically resurveyed and are not shown on this diagram. Refer to Chapter 1, United States Coast Pilot.

SOURCE

A	1990 - 2004	NCS Surveys	full bottom coverage
B4	1900 - 1939	NCS Surveys	partial bottom coverage



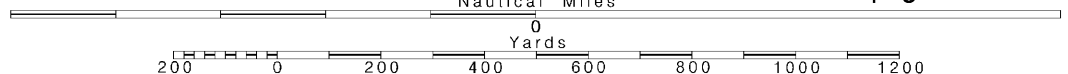
Englewood Cliffs

Joins page 16

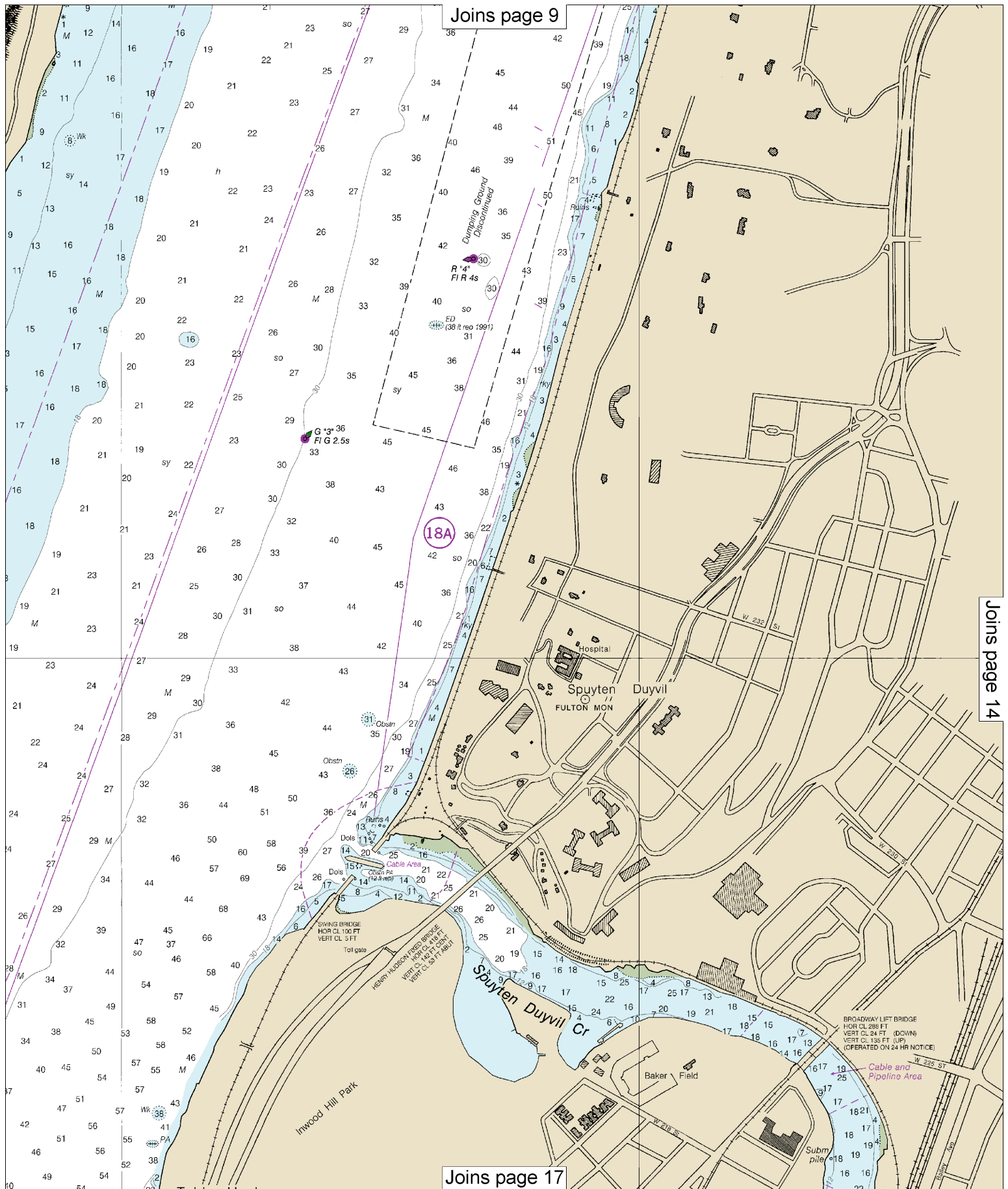
Printed at reduced scale.

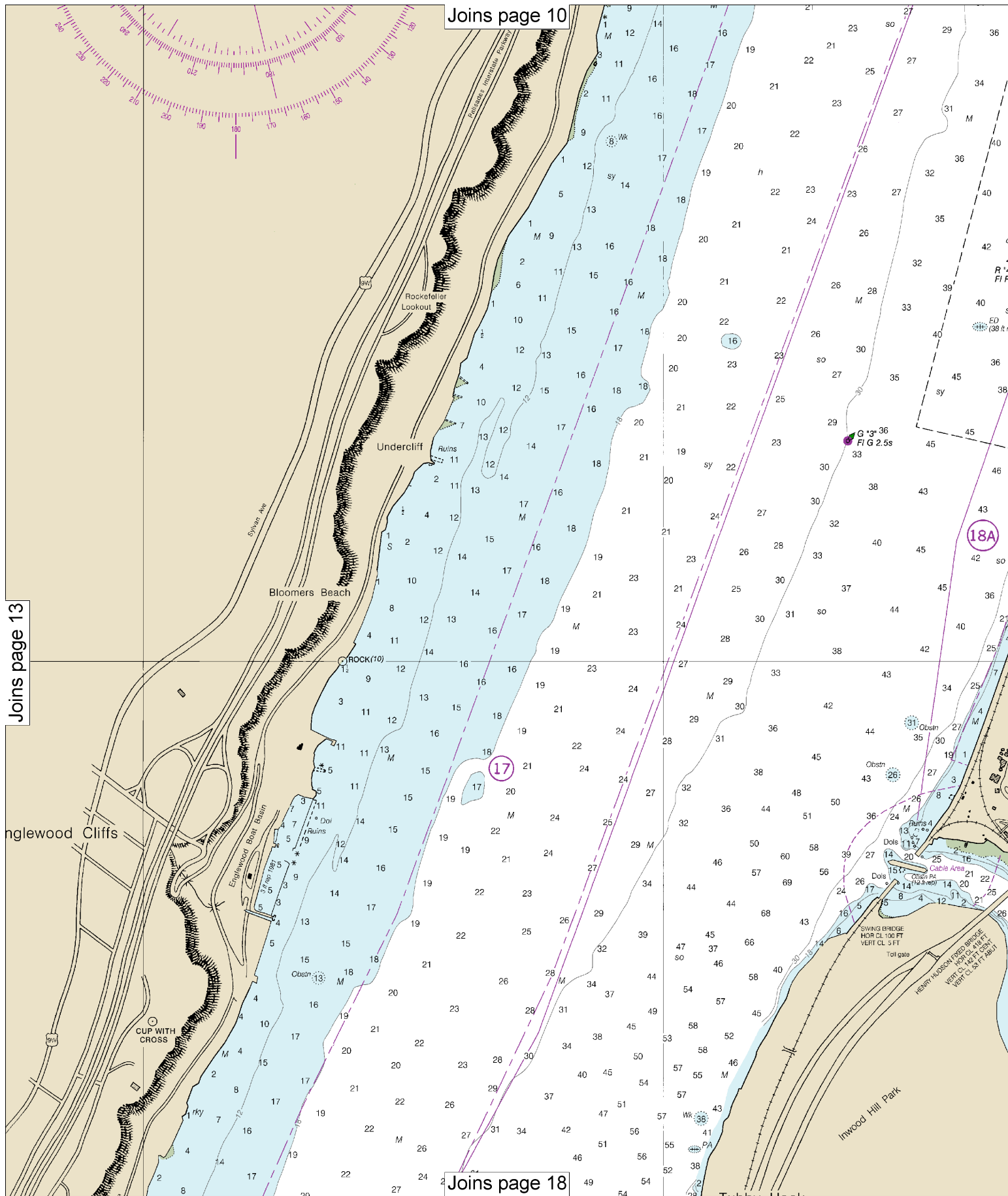
SCALE 1:10,000

See Note on page 5.

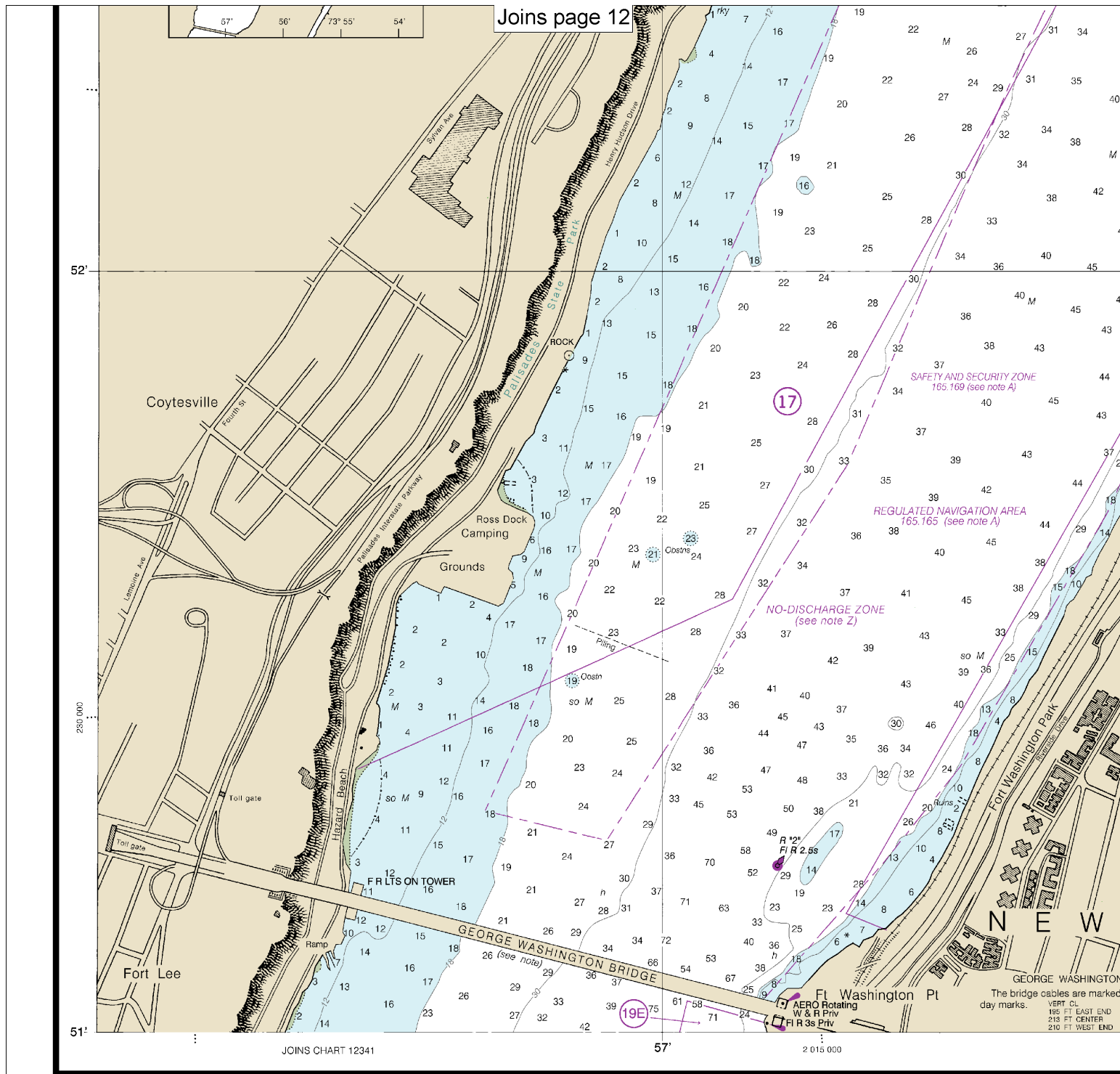


Note: Chart grid lines are aligned with true north.

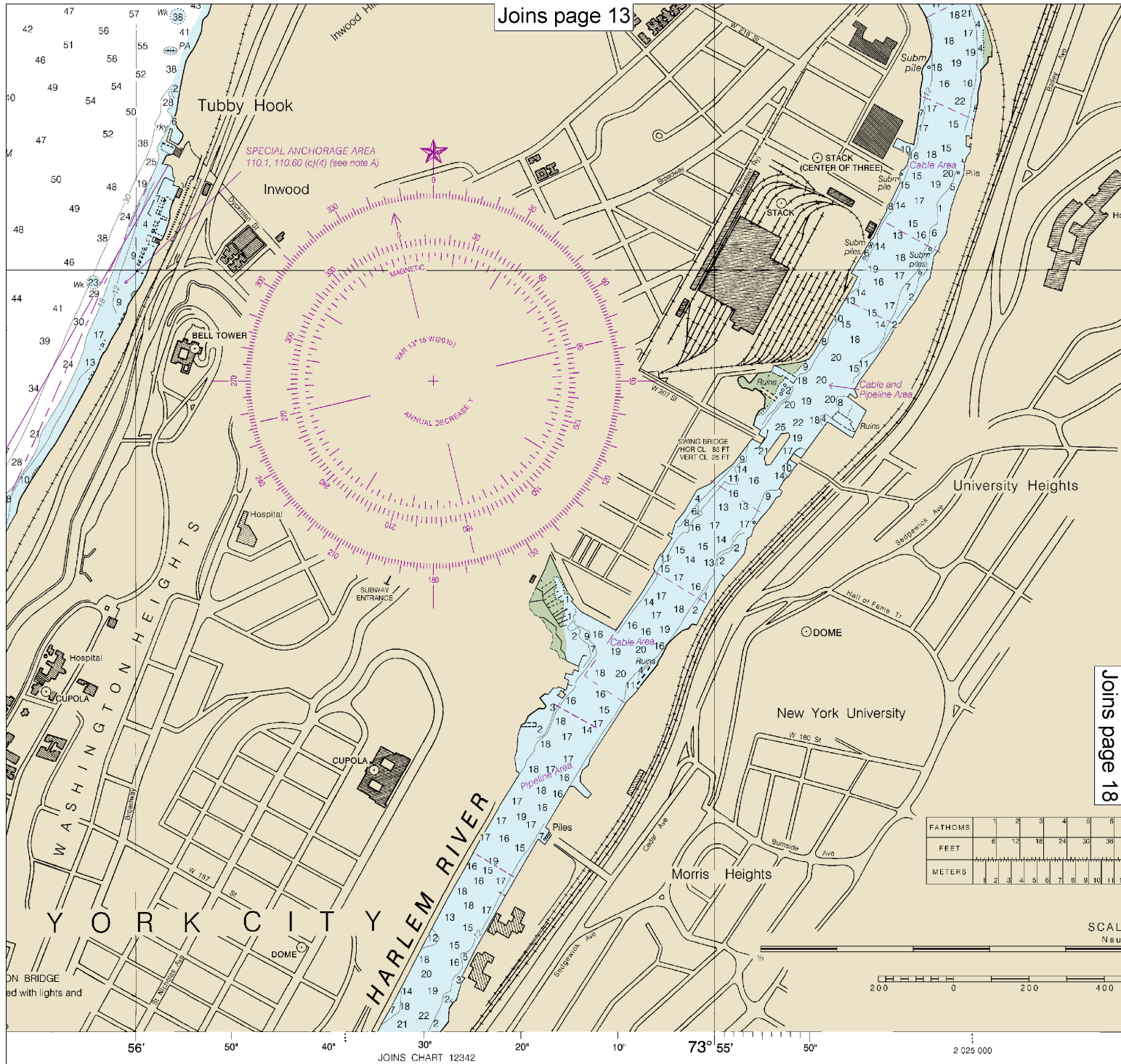








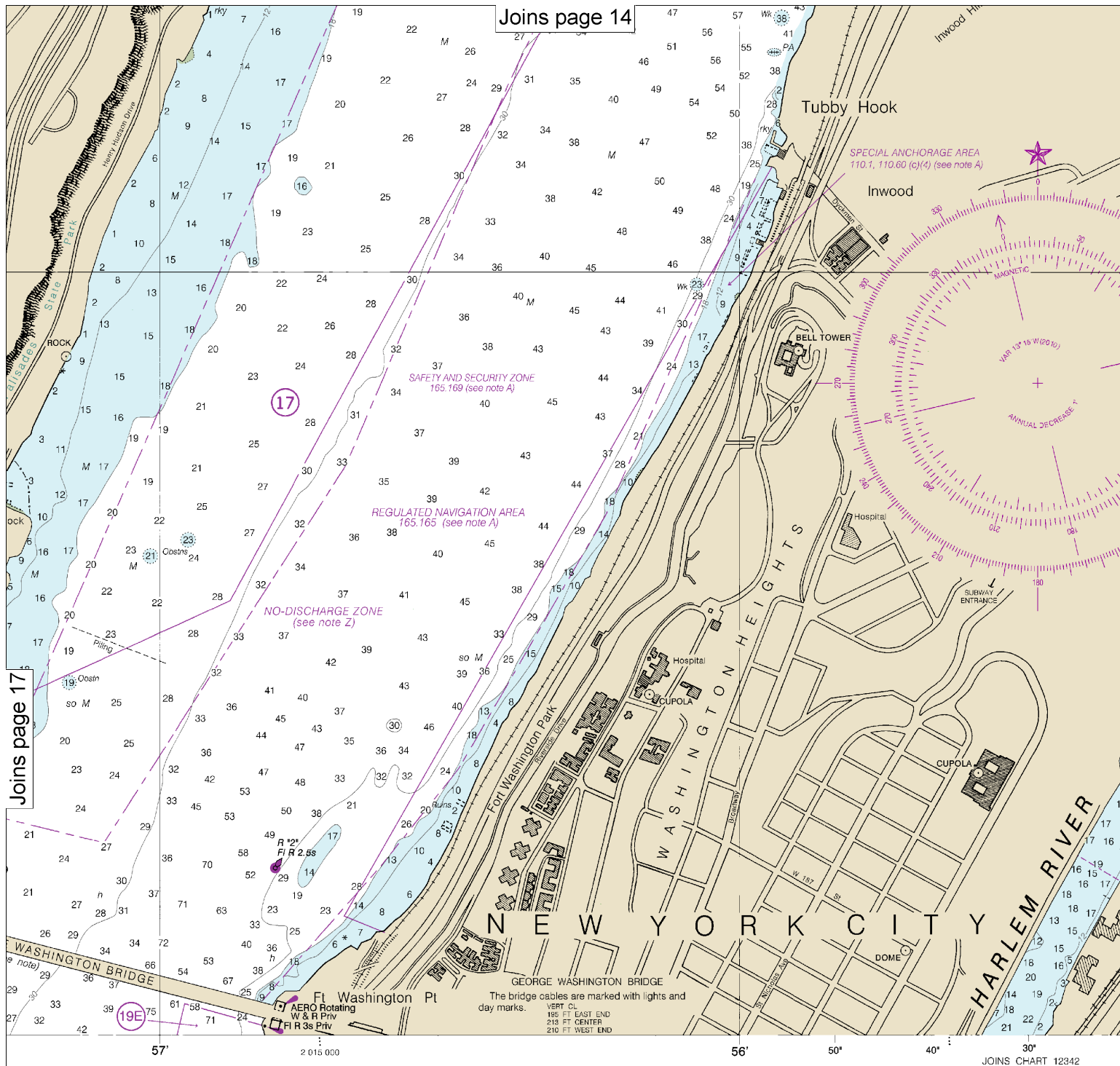
Joins page 13



ET

Published at Washington, D.C.
U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SERVICE
COAST SURVEY

Hudson River, George Washington
SOUNDINGS IN FEET - SCALE 1:1



CAUTION
 corrected from the Notice to Mariners (NM) published
 Geospatial-Intelligence Agency and the Local Notice to
 periodically by each U.S. Coast Guard district to the
 or left hand corner. Chart updates corrected from Notice to
 the dates shown in the lower left hand corner are available at

SOUNDINGS IN FEET

Published at Washington, D.C.
 U.S. DEPARTMENT OF COMMERCE
 NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
 NATIONAL OCEAN SERVICE
 COAST SURVEY

6. Cleared through:
 6), CHS: 1116 (11/25/2016)

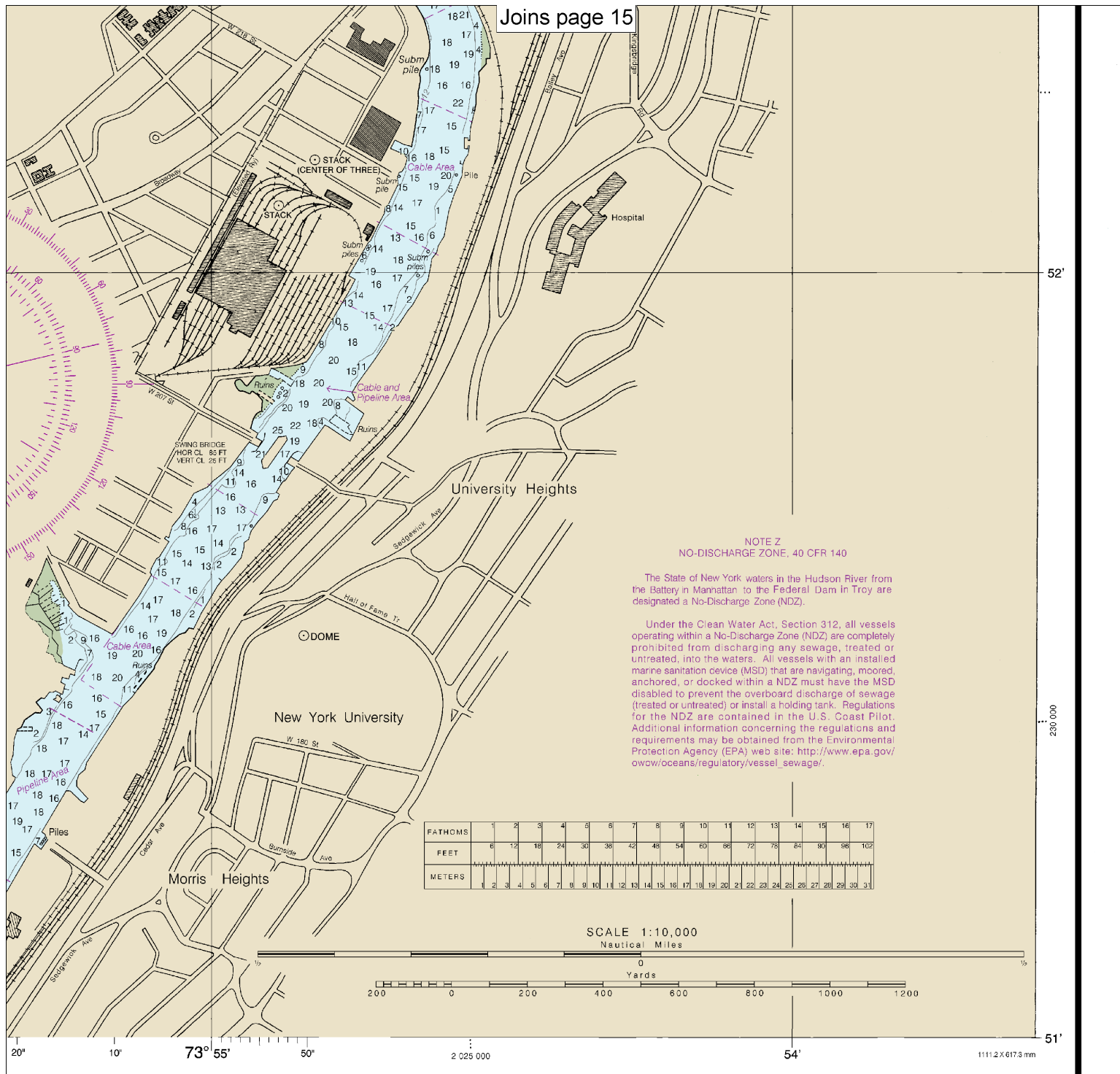
18

Note: Chart grid
 lines are aligned
 with true north.

Printed at reduced scale. — SCALE 1:10,000 —

See Note on page 5.





Hudson River, George Washington Bridge to Yonkers
SOUNDINGS IN FEET - SCALE 1:10,000

12345



VHF Marine Radio channels for use on the waterways:

Channel 6 – Inter-ship safety communications.

Channel 9 – Communications between boats and ship-to-coast.

Channel 13 – Navigation purposes at bridges, locks, and harbors.

Channel 16 – Emergency, distress and safety calls to Coast Guard and others, and to initiate calls to other

vessels. Contact the other vessel, agree to another channel, and then switch.

Channel 22A – Calls between the Coast Guard and the public. Severe weather warnings, hazards to navigation and safety warnings are broadcast here.

Channels 68, 69, 71, 72 and 78A – Recreational boat channels.

Getting and Giving Help — Signal other boaters using visual distress signals (flares, orange flag, lights, arm signals); whistles; horns; and on your VHF radio. You are required by law to help boaters in trouble. Respond to distress signals, but do not endanger yourself.



NOAA Weather Radio All Hazards (NWR) is a nationwide network of radio stations broadcasting continuous weather information directly from the nearest National Weather Service office. NWR broadcasts official Weather Service warnings, watches, forecasts and other hazard information 24 hours a day, 7 days a week.

<http://www.nws.noaa.gov/nwr/>

Distress Call Procedures

- Make sure radio is on.
- Select Channel 16.
- Press/Hold the transmit button.
- Clearly say: "MAYDAY, MAYDAY, MAYDAY."
- Also give: Vessel Name and/or Description; Position and/or Location; Nature of Emergency; Number of People on Board.
- Release transmit button.
- Wait for 10 seconds — If no response Repeat MAYDAY call.

HAVE ALL PERSONS PUT ON LIFE JACKETS!

Quick References

Nautical chart related products and information	—	http://www.nauticalcharts.noaa.gov
Interactive chart catalog	—	http://www.charts.noaa.gov/InteractiveCatalog/nrnc.shtml
Report a chart discrepancy	—	http://ocsddata.ncd.noaa.gov/idrs/discrepancy.aspx
Chart and chart related inquiries and comments	—	http://ocsddata.ncd.noaa.gov/idrs/inquiry.aspx?frompage=ContactUs
Chart updates (LNM and NM corrections)	—	http://www.nauticalcharts.noaa.gov/mcd/updates/LNM_NM.html
Coast Pilot online	—	http://www.nauticalcharts.noaa.gov/nsd/cpdownload.htm
Tides and Currents	—	http://tidesandcurrents.noaa.gov
Marine Forecasts	—	http://www.nws.noaa.gov/om/marine/home.htm
National Data Buoy Center	—	http://www.ndbc.noaa.gov/
NowCoast web portal for coastal conditions	—	http://www.nowcoast.noaa.gov/
National Weather Service	—	http://www.weather.gov/
National Hurricane Center	—	http://www.nhc.noaa.gov/
Pacific Tsunami Warning Center	—	http://ptwc.weather.gov/
Contact Us	—	http://www.nauticalcharts.noaa.gov/staff/contact.htm



— For the latest news from Coast Survey, follow **@NOAAcharts**



This Booklet chart has been designed for duplex printing (printed on front and back of one sheet). If a duplex option is not available on your printer, you may print each sheet and arrange them back-to-back to allow for the proper layout when viewing.